

Title (en)  
METHOD FOR PREPARING AN INJECTABLE CROSS-LINKED HYDROGEL, HYDROGEL OBTAINED; AND USE OF THE OBTAINED HYDROGEL

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES INJIZIERBAREN VERNETZTEN HYDROGELS, ERHALTENES HYDROGEL UND VERWENDUNG DES ERHALTENEN HYDROGELS

Title (fr)  
PROCEDE DE PREPARATION D'UN HYDROGEL RETICULE INJECTABLE; HYDROGEL OBTENU; UTILISATION DE L'HYDROGEL OBTENU

Publication  
**EP 3313452 B1 20190904 (FR)**

Application  
**EP 16736898 A 20160615**

Priority  

- FR 1501323 A 20150624
- FR 2016000096 W 20160615

Abstract (en)  
[origin: WO2016207496A1] The present invention relates to: a novel method for preparing an injectable cross-linked hydrogel containing hyaluronic acid, or one of the salts thereof, a hydrogel obtained according to said preparation method, and use of the hydrogel obtained according to said preparation method in the fields of aesthetics and medicine.

IPC 8 full level  
**A61K 47/36** (2006.01); **A61K 8/73** (2006.01); **A61K 31/728** (2006.01); **C08J 3/075** (2006.01); **C08J 3/24** (2006.01)

CPC (source: EP US)  
**A61K 8/042** (2013.01 - EP US); **A61K 8/33** (2013.01 - EP US); **A61K 8/735** (2013.01 - EP US); **A61K 9/06** (2013.01 - EP US); **A61K 31/728** (2013.01 - EP US); **A61K 47/36** (2013.01 - EP US); **A61P 17/00** (2017.12 - EP); **A61P 19/02** (2017.12 - EP); **A61Q 19/08** (2013.01 - EP US); **C08J 3/075** (2013.01 - EP US); **C08J 3/24** (2013.01 - EP US); **A61K 2800/91** (2013.01 - EP US); **C08J 2305/08** (2013.01 - EP US)

Citation (opposition)  
 Opponent : Merz Pharma GmbH & Co. KGaA  

- US 2007196426 A1 20070823 - HERMITTE LAURENCE [FR], et al
- WO 2014173941 A2 20141030 - AURIGA INTERNAT [BE]
- WO 2014198406 A1 20141218 - ANTEIS SA [CH]
- US 2012108537 A1 20120503 - BOURDON FRANCOIS [FR]
- PRINCESS® - DARE TO BE PERFECT, 1 April 2011 (2011-04-01), Retrieved from the Internet <URL:https://web.archive.org/web/20110401113107/http://selamedical.co.il/pdf/download.php?file=br\_princess\_ENG\_overview.pdf> [retrieved on 20200526]
- LAPCIK, L. JR. ET AL.: "Hyaluronan: Preparation, Structure, Properties, and Applications", CHEMICAL REVIEWS, vol. 98, no. 8, 1998, pages 2663 - 2684, XP000789004, DOI: 10.1021/cr941199z
- "Arbeitsmethoden in der Organischen Chemie", 2008, Berlin, article HUNIG ET AL.: "10.3.5 Entgasen von Flüssigkeiten", pages: 235, XP055967564
- "Praktikum Preparative Organische Chemie; Organisch-Chemisches Fortgeschrittenenpraktikum", 2009, Heidelberg, article BRUCKNER, R. ET AL.: "Ausgewählte Arbeitstechniken im Fortgeschrittenenpraktikum (in alphabetischer Reihenfolge)", pages: 60 - 63, XP055967568

 Opponent : laboratoires VIVACY  

- WO 2014173941 A2 20141030 - AURIGA INTERNAT [BE]
- WO 2014198406 A1 20141218 - ANTEIS SA [CH]
- WO 9425078 A1 19941110 - SEBBIN LAB [FR], et al
- WO 2005085329 A1 20050915 - ANTEIS SA [CH], et al
- EP 2489374 A1 20120822 - FABRE PIERRE DERMO COSMETIQUE [FR]
- EP 0117768 A1 19840905 - ESSILOR INT [FR]
- WO 2012076961 A2 20120614 - DE PAOLI AMBROSI GIANFRANCO [IT]
- RU 2051154 C1 19951227 - NII EPIDEMIOLOGII I MIKROBIOLO [RU]
- SELYANIN, ET AL: "Methods of Hyaluronic Acid Production", HYALURONIC ACID: PREPARATION, PROPERTIES, APPLICATION IN BIOLOGY AND MEDICINE, WILEY, 1 January 2015 (2015-01-01), pages 77 - 92, XP055754664
- YU, GUROV: "METHODS OF SYNTHESIS AND TECHNOLOGY OF DRUG PRODUCTION PRINCIPLES OF EXTRACTION AND PURIFICATION OF HYALURONIC ACID (REVIEW)", METHODS OF SYNTHESIS AND TECHNOLOGY OF DRUG PRODUCTION, 1 January 1990 (1990-01-01), pages 211 - 216, XP055754666

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**FR 3037797 A1 20161230; FR 3037797 B1 20180817**; EP 3313452 A1 20180502; EP 3313452 B1 20190904; US 10588922 B2 20200317; US 2018177819 A1 20180628; WO 2016207496 A1 20161229

DOCDB simple family (application)  
**FR 1501323 A 20150624**; EP 16736898 A 20160615; FR 2016000096 W 20160615; US 201615579216 A 20160615